



01

SQL Functions

used for Data Analysis task

Start →



Aggregate functions

1. COUNT () :

This function returns **the number of rows in a table** or **the number of non-null values** in a column.

Syntax :

```
SELECT COUNT(column_name) FROM table_name ;
```

2. SUM () :

This function returns **the sum of all values in a numeric column**.

Syntax :

```
SELECT SUM(column_name) FROM table_name ;
```



3. AVG () :

This function returns **the average of all values** in a numeric column.

Syntax :

```
SELECT AVG(column_name) FROM table_name;
```

4. MIN () :

This function returns **the minimum value** in a column.

Syntax :

```
SELECT MIN(column_name) FROM table_name;
```





5. MAX () :

This function returns **the maximum value** in a column.

Syntax :

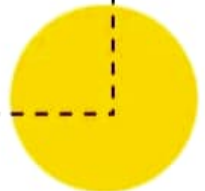
```
SELECT MAX(column_name) FROM table_name ;
```

6. GROUP BY () :

This function is used **to group the rows in a table based on the values in one or more columns**, and then perform aggregate functions on each group.

Syntax :

```
SELECT column_name, COUNT(column_name),  
SUM(column_name), AVG(column_name),  
MIN(column_name), MAX(column_name)  
FROM table_name GROUP BY column_name;
```





String Functions



7. CONCAT () :

This function is used to **concatenate two or more strings** together.

Syntax :

```
SELECT CONCAT(string1, string2) FROM table_name;
```

8. UPPER () :

This function is used **to convert all characters in a string to uppercase**.

Syntax :

```
SELECT UPPER(string) FROM table_name;
```





9. LOWER () :

This function is used **to convert all characters in a string to lowercase.**

Syntax :

```
SELECT LOWER(string) FROM table_name;
```

10. LENGTH () :

This function is used **to return the length of a string.**

Syntax :

```
SELECT LENGTH(string) FROM table_name;
```



11. TRIM () :

This function is used **to remove leading or trailing spaces** from a string.

Syntax :




```
SELECT TRIM(string) FROM table_name;
```

12. SUBSTRING () :

This function is used **to extract a substring** from a larger string.

Syntax :



```
SELECT SUBSTRING(string, start_position, length)  
FROM table_name;
```



13. REPLACE () :

This function is used to replace a substring within a string with a different substring.

Syntax :

```
SELECT REPLACE(string, old_substring, new_substring)  
FROM table_name;
```

Date Functions

14. GETDATE () :

This function returns the current date and time.

Syntax :

```
SELECT GETDATE() FROM table_name;
```




15. DATEPART () :

This function is used to extract a specific part of a date, such as the year, month, or day.

Syntax :

```
SELECT DATEPART(part, date) FROM table_name;
```

16. DATEADD () :

This function is used to add a specified number of units to a date or time value.

Syntax :

```
SELECT DATEADD(unit, value, date) FROM table_name;
```



17. DATEDIFF () :

This function is used **to calculate the difference between two dates or time values.**

Syntax :

```
SELECT DATEDIFF(unit, start_date, end_date) FROM table_name;
```

18. YEAR () :

This function is used **to extract the year from a date value.**

Syntax :

```
SELECT YEAR(date) FROM table_name;
```

